Math 120
Theme 1 Schedule and Objectives

Theme 1: Using Mathematics to Reason and Answer Questions
Project 1: *Create a Survey and Analyze Results*

Recall: View the videos and read the applicable sections BEFORE the first class of the week, and complete both the RC (Reading Checks) and HW (Home Work) before your assigned due dates.

Week 1

Unit 7A Objectives: Define outcome and event, describe and find theoretical probability and relative frequency probability
  Reading: Unit 7A
  RC 7A: 2 random from 1-10
  HW 7A: 1, 3, 9, 11, 15-BR, 21, 23, 24, 28, 29, 30, 49, 53, 55, 72
  HW Topics: Answer review questions involving fundamentals of probability (2); Decide if a statement involving probability makes sense (2); Use the multiplication principle (1); Find outcomes, events, probabilities, & probability distributions (6); Solve application problems involving probabilities & total number of combinations (4)

Unit 7B Objectives: Identify and apply the basic rules for adding and multiplying probabilities
  Reading: Unit 7B
  RC 7B: 2 random from 1-10
  HW 7B: 5, 15, 16, 18, 19, 24, 25, 26, 30, 34, 40, 52
  HW Topics: Decide if a statement involving combining probabilities makes sense (1); Find "&" probabilities (4); Find "either/or" probabilities (3); Use the "at least once" rule (2); Solve application problems involving combining probabilities (2)

Unit 7C Objectives: Explore the law of large numbers
  Reading: Unit 7C
  RC 7C: 2 random from 1-10
  HW 7C: 1, 9, 11, 13, 19, 20, 28, 35
  HW Topics: Answer review questions involving the law of large numbers & the expected value (1); Decide if a statement involving the law of large numbers makes sense (2); Apply the law of large numbers (1); Determine whether events or streaks are unlikely (1); Calculate & explain the expected value (3)

  Mini Project 7: Law of Large Numbers and Potential Streaks - A Die Rolling Simulation

Weeks 2 and 3

Unit 1A Objectives: Define and identify 10 common fallacies or deceptive arguments
  Reading: Unit 1A
  RC 1A: 2 random from 1-5 and 8-10
  HW 1A: 5, 7, 9, 11, 13, 15, 17, 18 , 19, 20, 25, 27, 29, 30, 31, 33, 35, 37, 39
  HW Topics: Decide whether a statement about logical arguments makes sense (3); Analyze fallacies
        (7); Identify types of fallacies (9)

Unit 1C Objectives: Identify sets and elements, describe relationships with and without Venn diagrams
  Reading: Unit 1C
  RC 1C: 1 random from 1-3, 1 random from 4-8
  HW 1C: 7, 9, 11, 13-BR, 15-BR, 17-BR, 19-BR, 21-BR, 22-BR, 23-BR, 25-BR, 27-BR, 30, 31, 33, 35,
        37, 39, 41, 43, 59, 63
  HW Topics: Decide if a statement involving sets & Venn diagrams makes sense (3); Identify the
        smallest number set that contains a given number (9); Use set notation to list the elements of a
        set (4); Use Venn diagrams to show the relationship between two sets (4); Use two-way tables to
        show the relationship between two variables (2); Use Venn diagrams with numbers to solve
        applications (1)

Unit 1D Objectives: Define argument types (inductive or deductive), and use Venn diagrams to test the
validity of arguments
  Reading: 1D pages 41-48, through example 8
  RC 1D: 2 random from 1-7
  HW 1D: 15, 16, 17, 25, 28, 29, 32, 35, 36
  HW Topics: Determine whether an argument is inductive or deductive (3); Analyze inductive
        arguments (2); Analyze deductive arguments with & without conditional propositions (4)

Unit 1E Objectives: Use the seven provided hints to analyze statements and solve problems
  Reading: Unit 1E
  RC 1E: 2 random from 1-9
  HW 1E: none
Mini Project 1: Using Venn Diagrams; Applying Critical Thinking

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Week 4

Unit 5C Objectives: Interpret and generate frequency tables, bar graphs, pie charts, histograms and line charts
  Reading: Unit 5C
  RC 5C: 2 random from Quick Quiz 1-10
  HW 5C: (Exercises) 7, 8, 9, 11, 17, 18, 19, 23, 24, 25, 27, 29, 35
  HW Topics: Decide if a statement involving statistical tables & graphs makes sense (4); Determine whether a variable is qualitative or quantitative (3); Construct & interpret frequency tables (2); Construct & interpret time-series, bar graphs, pie-charts, & histograms (4)
 	
Unit 5E Objectives: Use correlation to describe relationships between two data variables
  Reading: Unit 5E
  RC 5E: 2 random from Quick Quiz 1-10
  HW 5E: (Exercises) 11, 13, 15, 19, 23, 26, 27, 29, 31, 34, 35, 36
  HW Topics: Determine if a statement involving correlation & causality makes sense (1); Interpret scatterplots (3); Determine whether two variables are correlated (2); Create scatterplots (3); Determine possible explanations for a correlation (3)
 	
Class review and instruction in StatCrunch
 	
Mini Project 5: MyMathLab project to be completed online. Instructors may assign this for homework or ask that you bring in a device to complete.

Week 5
Presentation of Projects Theme 1 Test